

The returns to vocational education in the Netherlands

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11 The returns to vocational education in the Netherlands

ROLF K.W. VAN DER VELDEN & MAARTEN H.J. WOLBERS

Our aim in this chapter is to investigate how the transition from secondary vocational education to subsequent destinations takes place for individual school-leavers. Particular emphasis will be placed on changes in the so-called external returns to education through the years. For most types of education, the first students from the new study programmes still have to leave school, making it impossible at this moment in time to assess the impact of the introduction of the qualification structure on the external returns to secondary vocational education. One exception is the agricultural sector, where the new qualification structure was introduced in 1992. Considering the available data, we have restricted ourselves in this chapter to the first and second qualification objectives. The transfer to continuing education concerns the transfer to HBO (higher professional education) and dropouts from HBO. With respect to entry onto the labour market, this relates to aspects such as the chance of having a paid job, or a permanent job, the match between education and work, and wages. In addition, we have registered the answers of school-leavers to the question of whether the study programme prepares students adequately for subsequent destinations, and whether, looking back, they are satisfied with the choices made at the time with respect to their programme in secondary vocational education. The latter indicator provides a general opinion by school-leavers of the study programmes that they completed.

11.1 Introduction

A well-developed system of vocational education at secondary school level is often considered to be the backbone of the economy (Finegold & Soskice, 1988; Ryan, 1991). International comparative studies stress the importance of a sufficiently skilled labour force for productivity levels in industrial sectors (Cörvers, 1998), the avoidance of delays in production processes, and the quality of goods and services (Mason, Van Ark & Wagner, 1994; Steedman & Wagner, 1987). The importance of vocational skills at intermediate level is reflected in the fact that, in general, school-leavers from vocational pathways at intermediate level are well integrated into the labour market. In a review of the effects of vocational education on labour market outcomes, Boesel et al. (1994) reported positive labour market outcomes, especially when school-leavers find work in a related field. Bishop (1989) found evidence of higher earnings for those who had completed vocational training in the United States, and Van der Velden and

Wolbers (2000) showed small positive effects of the specificity of a course on hourly wages and the likelihood of finding a matching job for Dutch school-leavers.

These relationships between occupation-specific skills and labour market outcomes have often been used to explain cross-national differences in the integration of school-leavers into the labour market. In their comparative study of the transition from school to work in thirteen different countries, Müller and Shavit (1998) showed the positive effects of vocational specificity on the likelihood of entering skilled positions. The OECD Thematic Review of key features of successful transition systems points to – among other things – widespread opportunities to combine workplace experience with education (OECD, 2000), while Bishop (1995) made a plea for the extension of vocational training in the US to combat youth unemployment. The results, however, are not always consistent. Van der Velden and Wolbers (forthcoming) have shown that the differences in employment chances of school-leavers between different EU countries is significantly related to the existence of a dual system, but not to the vocational orientation of a country's education system. Ryan (2001) also reported more consistent findings in favour of a dual system, rather than a vocational orientation as such.

Notwithstanding these sometimes contradictory results, one of the primary explanations for the fact that Dutch school-leavers in general face few problems in the transition from school to work is the extended system of vocational education at intermediate level. This makes it interesting to see how the returns to this type of education have developed over the years. Moreover, it is interesting to analyse whether the introduction of the new Adult and Vocational Education Act has led to an improvement in the match between education and jobs. The objective of this Act was to introduce a new qualification structure into secondary education (*Ministerie van Onderwijs, Cultuur en Wetenschappen* [Ministry of Education], 1996). From 1 August 1997, we distinguish five types of education, linked to four qualification levels. This new qualification structure describes what study programmes should teach. National final attainment targets have been formulated for each study programme, stating what should be expected of school-leavers at each of the four levels at the end of their studies. Within this framework, each study programme was assigned three qualification objectives. These objectives relate to the way in which the study programme prepares its students for continuing education (transfer qualification), occupational performance (labour market qualification) and social and cultural performance (social qualification). In the present evaluation we will restrict ourselves to the first and second qualification objective.

11.2 Data and model

For the analysis of the external returns to secondary vocational education, we have made use of data from the school-leaver surveys of the ROA (Research Centre for Education and the Labour Market). Since the beginning of the 1990s, ROA has been conducting annual surveys among school-leavers from secondary vocational education. Every autumn, several tens of thousands of school-leavers from these study programmes are approached, providing a nationally representative overview of the outflow and destinations of this group. The timing of the survey is approximately eighteen months³¹ after they have

³¹ Until the year 1995, the survey was held one year after students had left school.

completed their studies, which means that the figures obtained in the year of measurement reflect the outflow cohort of the previous year. The information collected concerns the destinations of school-leavers, focusing both on the transfer of students to continuing study programmes and entry onto the labour market. In addition, the survey provides information for an evaluation of the curriculum of the education completed and of the education itself.

For the present analysis, we have made use of the school-leaver data from full-time study programmes, starting with the outflow cohort of 1990/91. These full-time study programmes are divided into long tracks *MBO* (upper secondary vocational education) and short tracks *KMBO* (short full-time *MBO*). School-leavers from the so-called dual programmes (apprenticeships) have not been included, because their data have only been collected recently. Considering the limited time that has passed since the introduction of the *WEB* (Adult and Vocational Education Act) in August 1997, the outflow from study programmes in the new qualification structure cannot be observed in full yet. School-leavers from the 4-year programmes, for example, would have left school no earlier than June 2001. This means that we cannot provide a definitive evaluation of the qualification structure. The present analysis must be regarded as a preliminary measurement, providing insight into the developments with respect to external returns to education in the situation before the introduction of the qualification structure. As stated above, the agricultural sector is the only sector for which we were able to assess the effects of the introduction of the qualification structure. The reason for this is that the new qualification structure was introduced into this sector in August 1992 (Geerligs, 1999; Gielen & Le Rutte, 1998).

One complicating factor in the evaluation is the extent to which developments in the returns to study programmes in the agricultural sector are actually the result of the introduction of the qualification structure and not related to any other factors, some of which may distort the picture. There are three groups of factors, the effects of which we need to eliminate through statistical control in a multivariate analysis: characteristics of school-leavers, characteristics of the study programme itself, and of social changes (Van der Velden & Wolbers, 2000). School-leaver characteristics concern the composition of the student population. These include personal characteristics, such as motivation, intelligence, etc., which affect the transfer to continuing education or entry onto the labour market. Usually, there are no direct measurements available for these characteristics, and hence they are often indirectly operationalised on the basis of a number of student characteristics of a sociostructural nature. In the present analysis, we therefore take into account the individual characteristics of ethnicity, gender, previous education and age.

The characteristics of the study programme include the specific properties of a programme that give school-leavers a relative advantage (or disadvantage) in subsequent destinations. For example, in the case of entry into the labour market, the position of a study programme is determined by the estimation that employers make of training costs (Thurow, 1975). Job applicants are placed in an imaginary 'labour queue' on the basis of these expected training costs. If school-leavers from a particular study programme require few expenses to bridge the 'gap' between the available competencies and those required, then this study programme will be at the top of the list. In principle, the expected training costs relating to a study programme are determined by three components: specificity, selectivity and complexity (Glebbeek, 1988; Van der Velden & Wolbers, 2000). The specificity of a study programme relates to the degree to which a programme prepares specifically for particular jobs, the selectivity of a programme concerns the risk that school-leavers from a study programme

possess the skills taught to a lesser degree, while the complexity of a programme is related to the indicators of the general learning abilities of students that are connected to the study programme. The most obvious indicator for determining variation between study programmes with respect to these components concerns the field of education. In the analysis, we therefore use the sector of the education completed by school-leavers in order to check for differences in the specific characteristics of study programmes.

In the case of social changes, one should first think of general developments on the labour market. The relationships between the supply and demand of study programmes may have changed in the course of time, without this having anything to do with the introduction of the new qualification structure. Other social developments – such as an increase in participation in education – may also have occurred without a direct relationship to the introduction of the qualification structure. To take such social changes into account, we have included in the analysis a variable that indicates in which school year the students left the study programme with a diploma.

11.3 Transfer to continuing education

The evaluation of the transfer to *HBO* can be conducted largely on the basis of two factors. The first factor concerns the relative transfer to *HBO*, which cannot be interpreted unequivocally. The extent of the transfer to *HBO* must be seen in relation to the transition to the labour market, because the study programmes in secondary vocational education prepare both for continuing education and for jobs. If the transfer rate to continuing education is very high, this probably gives some indication of inadequate preparation for occupational practice. On the other hand, if the transfer rate is very low, this may be related to a limited need for additional qualifications or to an inadequate match between secondary vocational education and *HBO*.

The second factor concerns success in continuing education, or the internal returns in the *HBO* programme³². Success in continuing education (or rather a lack of it) is established on the basis of the percentage of individuals who have made the transfer and then left the *HBO* programme prematurely. We have also determined the percentage of dropouts who have chosen another study programme (so-called study-shifters). It is necessary, however, to interpret these figures with some care: the scores of these indicators are not only determined by the extent to which secondary vocational education prepares for a study in *HBO*, but also depend on the characteristics of the *HBO* study itself.

Figure 1 shows the development of transfer to *HBO* since the outflow cohort of 1990/91. First of all, this figure indicates that there are considerable differences between educational sectors. *MBO* school-leavers in the behaviour and society sector make the transfer to *HBO* most often, followed by school-leavers from the technology and economics sectors. School-leavers from the agricultural and health care sectors, on the other hand, are the least inclined to embark on a study in *HBO*.

³² Information on success in continuing education has only been collected since the 1994/95 outflow cohort. This means that any trend developments can only be observed for a period of four years.

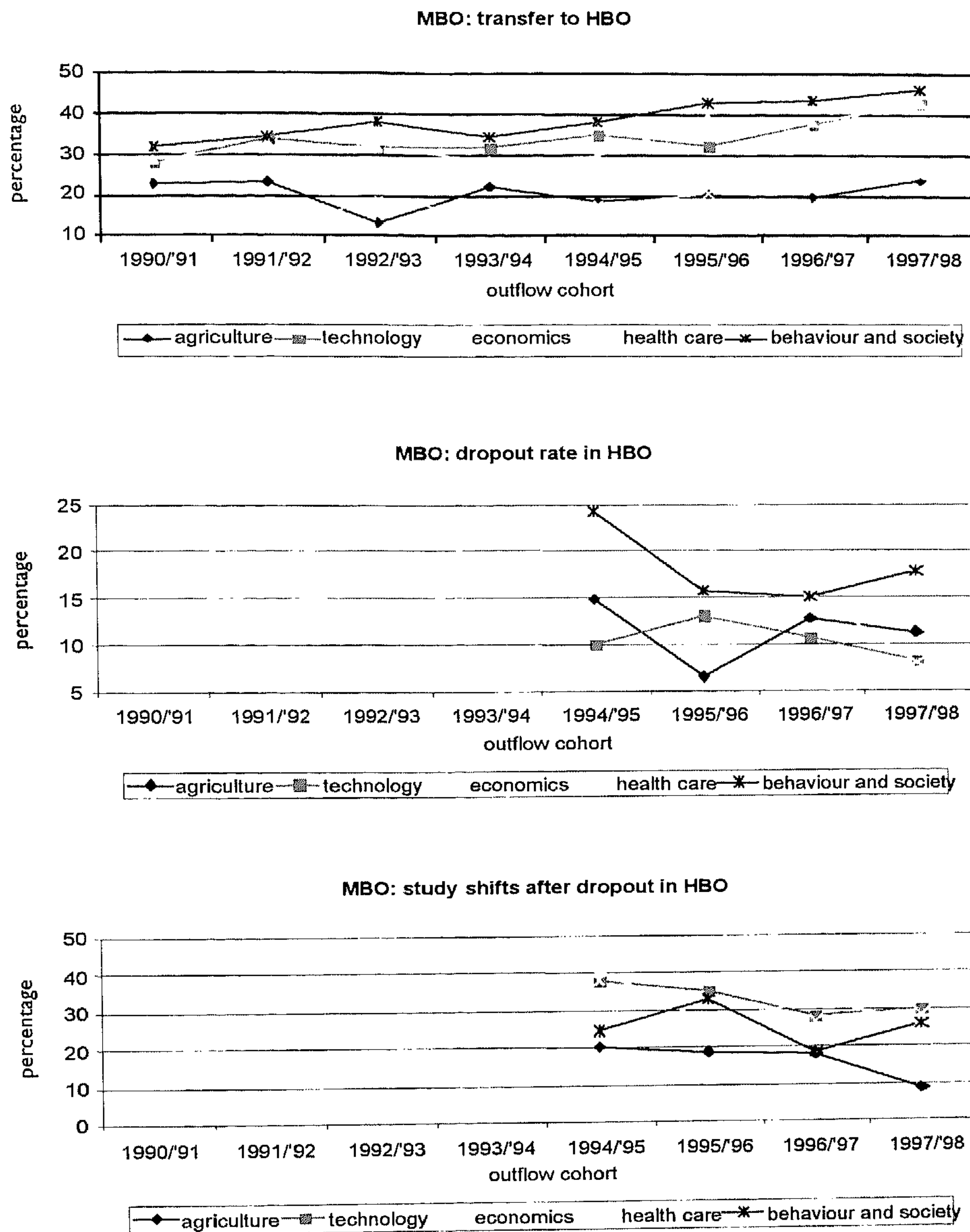


Figure 11.1: Developments in various indicators of the transfer to continuing education for school-leavers from MBO (long tracks)
Source: ROA, RUBS 1992-1999

Figure 11.1 also shows that there is a considerable increase in the percentage of MBO school-leavers who opt for a subsequent study in HBO. Across the educational sectors, this percentage increased on average from 25% in 1990/91 to 39% in 1997/98. Only the agricultural sector shows a different picture,

where the percentage of those who transfer to continuing education appears not to have changed. The question is whether this deviating development for the agricultural sector is related to the introduction of the qualification structure. To find out, a logistic regression analysis was carried out in order to determine whether the introduction of the qualification structure has had a statistically significant effect on the chance of transferring to HBO. As indicated above, this can only be determined if we take into account any influences from characteristics regarding the composition of the group of school-leavers, differences between educational sectors, and changes in the course of time.

Using a stepwise model structure, adding another group of factors to the analysis in each step, we have investigated whether we could observe an effect that could be attributed to the introduction of the qualification structure, and what remained of this effect after the inclusion of additional variables in the model. The effects of the introduction of the qualification structure for the various models are represented in table 11.1. Model 1 relates to the analysis in which we have only taken into account the differences between educational sectors. Model 2 shows the effect of the qualification structure after checking statistically for any differences between educational sectors and differences in the composition of the school-leaver population with respect to the characteristics of ethnicity, gender, previous education, and age. Model 3 shows the effect of the introduction of the qualification structure after checking for the variables of educational sector, ethnicity, gender, previous education, age and outflow cohort³³.

| Indicator | Effect introduction QS in agricultural sector | | |
|-----------------------------------|---|----------------------|----------------------|
| | model 3 ^a | model 3 ^b | model 3 ^c |
| MBO (long tracks) | | | |
| Continuing education | | | |
| Transfer to HBO | -0.248** | -0.009 | -0.543** |
| Dropouts in HBO | -0.046 | -0.068 | 0.118 |
| Study shifts after dropout in HBO | -0.592 | -0.539 | -0.274 |

Notes: * = $p < 0.05$; ** = $p < 0.01$; ^a = checked for educational sector; ^b = checked for educational sector, ethnicity, gender, previous education and age; ^c = checked for educational sector, ethnicity, gender, previous education, age and outflow cohort.

Table 11.1: Effects of the introduction of the qualification structure (QS) into the agricultural education sector on indicators of the transfer to continuing education for school-leavers from MBO (long tracks): logit effects

Source: ROA, RUBS 1992-1999.

Table 11.1 shows that, after the introduction of the qualification structure, the chance of a transfer to HBO is considerably lower for the agricultural sector. The estimated logit effect of model 1 implies that, after the introduction of the qualification structure, the chance of transfer versus no transfer to HVE

33 The effects of control variables are not shown here. Detailed information can be found in Wolbers (2001).

is only four-fifths of the corresponding odds ratio before the introduction of the qualification structure ($e^{-0.248} = 0.780$). This effect is no longer significant if we take into account differences between educational sectors in the characteristics of school-leavers (see model 2). If we subsequently check for changes over time, the effect of the qualification structure is again unmistakably present.

The effect of the qualification structure that was found may be explained by taking into account the level of the education completed. A number of study programmes that used to be classified as long-track *MBO* programmes and which provided direct access to *HBO* were devalued to level 3 study programmes after the introduction of the qualification structure. As a result, the number of school-leavers with an education at level 3 has increased in relation to the number of school-leavers with an education at level 4 (see also Gielen & Le Rütte, 1998: 113). The fact that level 3 programmes no longer provide access to *HBO* in the new qualification structure may have caused a decrease in the total transfer from *MBO* to *HBO* after the introduction of the qualification structure. In a further analysis (see Wolbers, 2001), we indeed observed a significant drop in the transfer rate to *HBO* for study programmes at level 3 (from 14% to 2%), while no significant difference in the transfer rate was found for study programmes at level 4 after the introduction of the qualification structure (transfer rates being 35% and 33%, respectively). In all, this has resulted in a major decrease in the transfer to *HBO* for the agricultural sector as a whole.

The transfer from *MBO* to *HBO* is accompanied by some dropout (see figure 11.1)³⁴. Within about one year after starting their *HBO* study, approximately 15% of those who made the transfer had already left their studies again. More than a quarter of them continued their educational career in another study. It is unknown whether this study shift concerns another *HBO* study or a different study elsewhere. A comparison between the outflow cohorts shows that dropout rates have decreased slightly recently. This is offset by the fact that the percentage of study-shifters has also decreased a little over the past few years.

The problem of *MBO* dropouts in *HBO* is comparable to that of school-leavers from the general tracks in secondary education *HAVO* (upper general secondary education). However, the reasons for dropping out differ for the various study programmes (ROA, 1998). Those who came from *HAVO* relatively often had too little discipline and preferred to take a different study. Those who came from *MBO* relatively often said that the match with the subsequent study was not what they had expected, and they eventually preferred to accept a job.

There are fairly large differences between educational sectors in *MBO* with respect to dropouts. Dropout rates are highest in the behaviour and society sector, followed by economics. In the agricultural and technology sectors, there are relatively few dropouts. A few years ago, the health care sector had a relatively high dropout rate, but today it has the lowest of all educational sectors. With respect to the number of study-shifters, we observe that this percentage is relatively low in the

34 Information on dropouts has only been collected since the 1994/95 outflow cohort. This means that no previous measurements can be made for study programmes at level 3 in the agricultural sector. After all, the first new outflow at this qualification level was already observed in that school year. This means that the estimated effect of the qualification structure (in table 11.1) only relates to study programmes at level 4.

agricultural sector. This seems to indicate that those in the agricultural sector who leave their studies prematurely eventually opt for a destination outside education. In addition, the percentage of study-shifters in the agricultural sector halved in four years (from 20% in 1994/95 to 10% in 1997/98). These deviating findings for the agricultural sector appear to have no relation to the introduction of the qualification structure. The results presented in table 11.1, after all, show that the qualification structure has had no significant influence on the chance of dropping out of *HBO*, or on the chance of shifting studies after dropping out of *HBO*.

11.4 Labour market entry

In addition to teaching the competencies that are relevant to the transfer to continuing education, secondary vocational education provides students primarily with the skills that are necessary to perform effectively in occupational practice. To assess how successful education is in teaching the so-called labour market qualifications, studies often determine the labour market position of individuals after leaving their studies. In such an analysis, different indicators are used to describe in detail the allocation process of school-leavers on the labour market. This concerns in particular such issues as the chance of having a paid job, or of having a permanent job, the match between one's education and one's job, and wages. Empirically, these different aspects of the labour market position can be reduced to two underlying dimensions (Van der Velden & Wieling, 1994): the chance of having a job and the quality of the job. These two dimensions are barely related. This means that an education that offers greater opportunities for work does not necessarily imply a good quality job. To be able to assess the external returns of study programmes, it is therefore important to consider both dimensions and their indicators.

In this analysis, the chance of having a job is determined by two indicators. We first look at the chance of having a paid job. In addition, we also consider the chance of having a permanent job: a job in which one has an employment contract of unlimited duration or a temporary job with a duration of more than one year.

To indicate the quality of work, we also used two indicators: firstly, the match between education and work. The chance of having a job at one's own level is determined by comparing the level of the education completed with the level of the education required by the employer. If the required level is identical or higher, we consider the job to be at the right level. In addition, we look at the wages paid. Wages are defined as the gross hourly wages of the job in which one spends the largest number of hours.

Figure 11.2: shows the developments in the indicators of the chance of having a job for *MBO*.

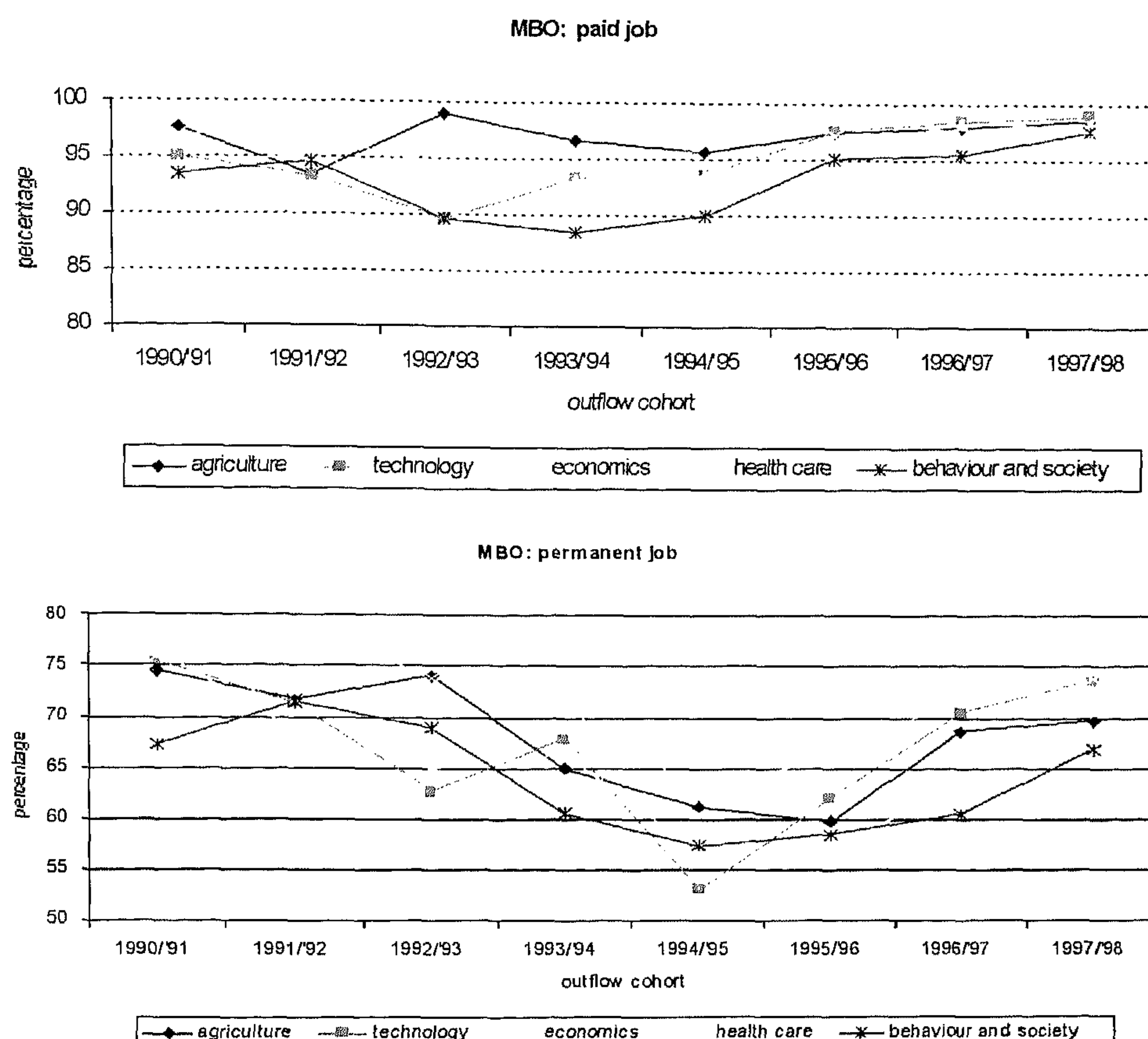


Figure 11.2: Developments in various indicators of the chance of having a job for MBO school-leavers (long tracks)

Source: ROA, RUBS 1992-1999.

The chance of having a paid job decreased at the beginning of the 1990s, and subsequently increased sharply. At this moment, there is almost full employment among school-leavers who present themselves on the labour market. Unemployment among MBO school-leavers was even less than 2% for the 1997/98 outflow cohort. In the period surveyed, the agricultural sector has always had the lowest unemployment rate, but the differences between the educational sectors are very small. For this reason, we have not been able to observe any effect of the introduction of the qualification structure into the agricultural sector (see table 11.2).

The changes in the number of school-leavers with a permanent job follow developments in paid work with a delay. Apparently, when employers assign permanent jobs, they are reacting to the state of the economy. The number of permanent jobs was lowest for school-leavers in the 1994/95 cohort; after that, the so-called flexibilisation trend on the labour market for school-leavers turned around. In the most recent outflow cohort, approximately 70% have a permanent job. If we look at the differences

between educational sectors, we see that the percentage of school-leavers with a permanent job is lowest in the economics, and behaviour and society sectors. School-leavers with an education in health care have the greatest chance of a permanent appointment. Those who were educated in agriculture or technology take a position in the middle, with the pattern of the latter group of school-leavers proving to be very sensitive to economic fluctuations.

| Indicator | Effect introduction QS in agricultural sector | | |
|--|---|----------------------|----------------------|
| | model 3 ^a | model 3 ^b | model 3 ^c |
| MBO (long tracks) | | | |
| Labour market | | | |
| Paid job | 0.352 | 0.360 | -0.353 |
| Permanent job | -0.218** | -0.215** | -0.073 |
| Job at right level | -0.178* | -0.203** | -0.217** |
| Wages (natural logarithm) ^d | 0.150** | 0.137** | -0.012 |
| KMBO (short tracks) | | | |
| Labour market | | | |
| Paid job | -0.112 | -0.083 | -0.607 |
| Permanent job | -0.341 | -0.334 | -0.189 |
| Job at right level | -0.371 | -0.410 | -0.725** |
| Wages (natural logarithm) ^d | 0.032 | 0.044 | -0.036 |

Notes: * = $p < 0.05$; ** = $p < 0.01$; ^a = checked for educational sector; ^b = checked for educational sector, ethnicity, gender, previous education and age; ^c = checked for educational sector, ethnicity, gender, previous education, age and outflow cohort; ^d = non-standardised regression effects, instead of logit effects.

Table 11.2: Effects of the introduction of the qualification structure into the agricultural education sector on the labour market position of school-leavers in (K)MBO: logit effects

Source: RCOA, RUBS 1992-1999

The first impression is that the introduction of the qualification structure into the agricultural education sector has led to a decrease in the chance of finding a permanent job (see table 11.2). This effect disappears, however, as soon as we take into account general developments on the labour market.

The indicators of the chance of finding a job for school-leavers in KMBO show a much more whimsical development (see figure 11.3). In general, the chance of finding a paid job has increased for KMBO school-leavers. In the past, employment perspectives in particular in the health care sector lagged behind other sectors, but today the difference is very small. Just like in MBO, there are at the moment hardly any differences between education sectors in KMBO. The chance of finding a permanent job has not changed much across the board. However, there are considerable shifts between sectors that differ

greatly from each other. For example, the chance of a permanent job for those with a technical education has increased sharply in the course of time. In 1990/91, 40% of all school-leavers in the technology sector had a permanent position, while this percentage was more than 70% in 1997/98. In the economics sector, on the other hand, the situation deteriorated dramatically.

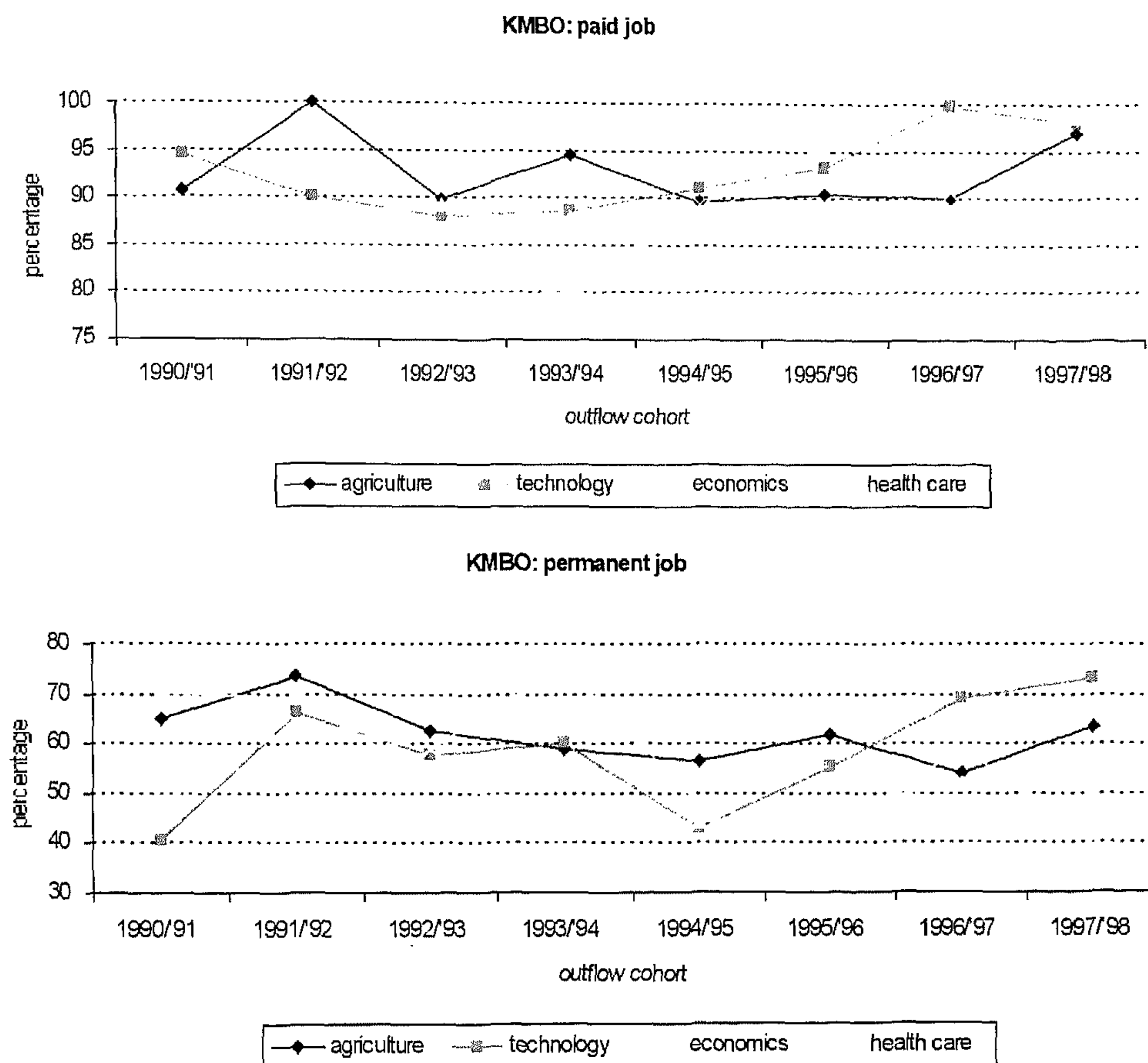


Figure 11.3: Developments of various indicators of the chance of finding a job for school-leavers in KMBO (short tracks)

Source: ROA, RUBS 1992-1999

Whereas about 70% of school-leavers in the economics sector had a permanent job in 1990/91, this figure had dropped to only 50% in 1997/98. The situation for the agricultural sector hardly changed in the period covered by this study. This does not mean, however, that developments in the agricultural sector – as a result of the introduction of the qualification structure – were significantly different from those in the other education sectors, as can be seen from table 11.2.

Developments in the quality of work have also changed in the course of time. Figure 11.4 represents these changes for MBO school-leavers. With respect to the chance of finding a job at least at one's own educational level, we may conclude that this initially decreased sharply at the beginning of the 1990s, only to rise steadily during the second half of that decade. In spite of this rise, the percentage of school-leavers from the most recent cohort that have a job at their own level is still 7% below the comparable percentage of the oldest cohort (81% in 1990/91 against 74% in 1997/98). Overeducation has therefore become a greater problem among MBO school-leavers during the past decade. Differences between educational sectors show that the position of the agricultural sector has become a great deal less favourable than that of the other sectors. In addition, the situation for the agricultural sector worsened after the introduction of the qualification structure (see table 11.2). The estimated difference in the odds ratio is 0.805 ($e^{-0.217}$). Further analysis (Vvolbers, 2001) proved again that – as soon as a subdivision is made, based on the level of the agricultural education completed – this deterioration only affects school-leavers who left their study at level 3.

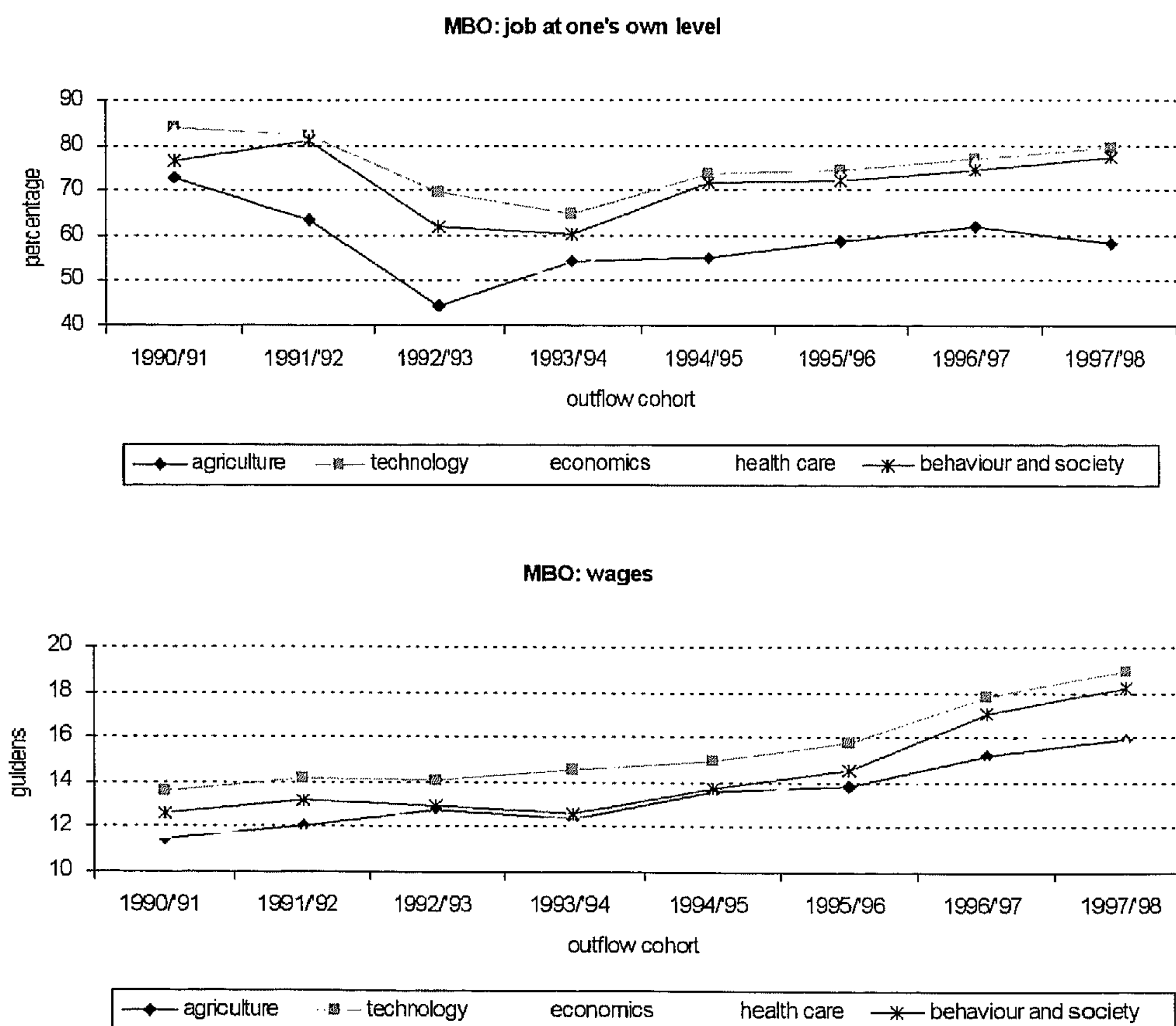


Figure 11.4: Developments of various indicators of the quality of work among MBO school-leavers (long tracks)

Source: ROA, RUBS 1992-1999

Wages for MBO school-leavers with a diploma have risen sharply during the past few years. During the period of this study, average gross hourly wages rose from NLG 12.30 to NLG 17. This is an increase of a good 38%. To some extent, this increase is due to the reduction in working hours. We should also take into account inflation in this period. Nevertheless, part of the wage developments reflects a real increase in wages. In this way, the current shortage on the labour market is manifesting itself in a rise in starting salaries for school-leavers. The wage development that was observed applies almost equally to all educational sectors, although there are absolute differences in wages. Gross hourly wages are highest among those with a technical education, followed by school-leavers from the behaviour and society sector. In the other sectors, gross hourly wages are considerably lower. At first sight, it seems as if the introduction of the qualification structure into the agricultural sector has led to an increase in wages (see table 11.2). However, if we take into account the general increase in starting salaries, the effect of the introduction of the qualification structure disappears (compare models 1 and 2 with model 3).

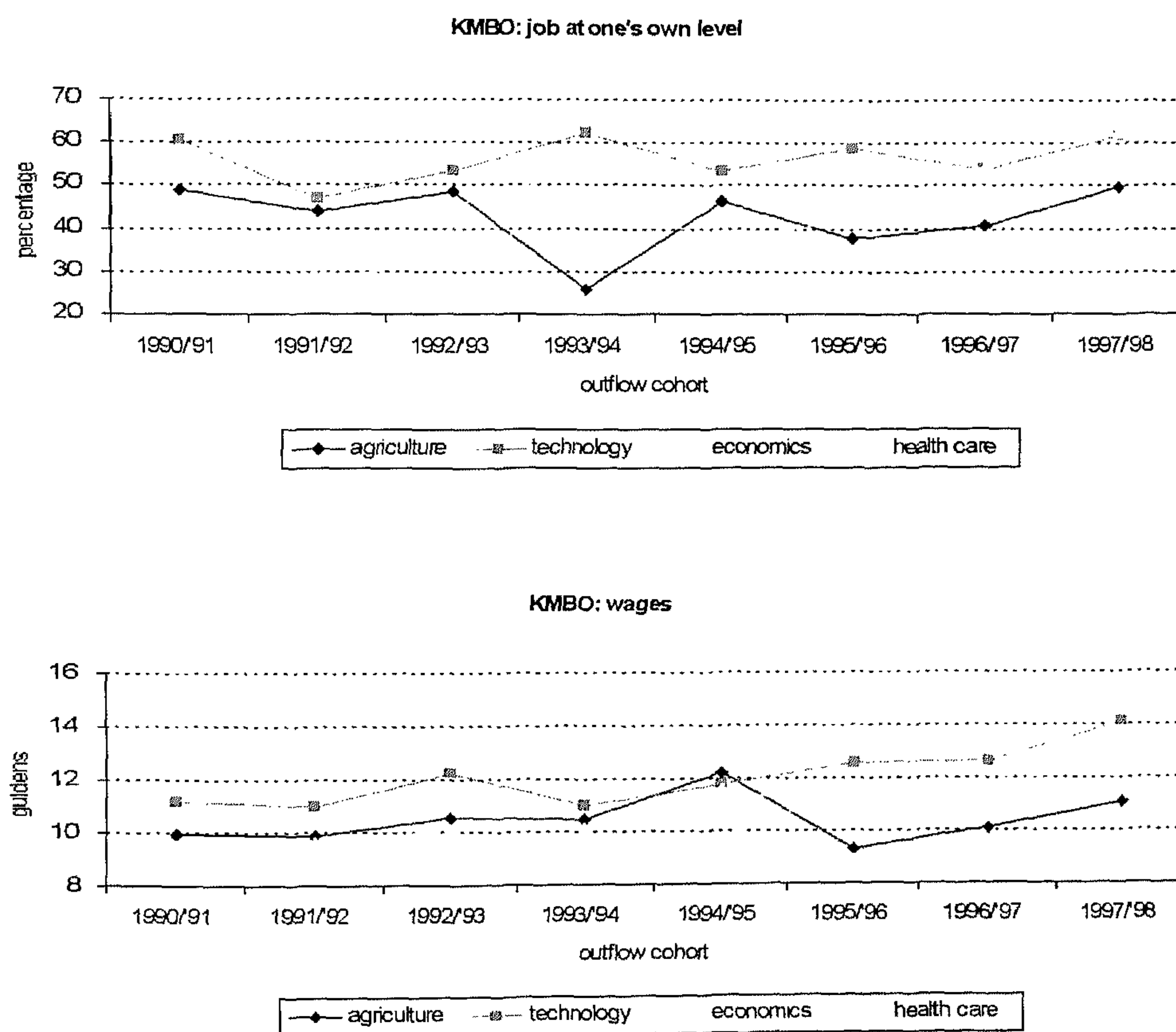


Figure 11.5: Developments of different indicators of the quality of work for KMBO school-leavers (short tracks)

Source: ROA, RUBS 1992-1999

Figure 11.5 shows the developments in the quality of work for *KMBO* school-leavers. The figures presented indicate that the chance of work at one's own level increased for *KMBO* as a whole during the period that was investigated. At this moment, approximately 60% of all school-leavers who work have a job that matches their educational level. The observed increase can be attributed entirely to the health care and economics sectors, where the number of school-leavers working in a job at *KMBO* level increased by 19% and 17%, respectively. In the technology and agricultural sectors, little has changed with respect to the number of school-leavers working at a matching level over the past few years. For the agricultural sector, this means that its position has deteriorated in relative terms. Using a multivariate analysis, we find that this is related to the introduction of the qualification structure. Table 11.2, after all, shows that the chance of a matching job is significantly smaller for the outflow cohorts from the new qualification structure.

Like the wages of *MBO* school-leavers, those of *KMBO* school-leavers have also increased sharply during the past few years. At this moment, average gross hourly wages are NLG 13.40 (this would now equal € 6.08). This is almost NLG 3.50 less than those of *MBO* school-leavers. *KMBO* school-leavers with a technical education earn the most. However, their advantage has almost been eliminated by school-leavers from the economics and health care sectors. The income position of school-leavers in the agricultural sector appears to have deteriorated in relative terms over the past few years. Table 11.2, however, does not show that this deterioration can be attributed to the introduction of the qualification structure in this sector.

11.5 General opinion of study programmes

At the end of this chapter, we discuss the general opinions held by school-leavers of the study programmes that they completed. This is a subjective evaluation of the study taken, focusing on the question of the extent to which the study programme had prepared them adequately for their next destination, as well as a statement on whether, looking back, they were satisfied with the choice made in favour of the programme in secondary vocational education.

With respect to their opinion of the match between the education completed and the subsequent destinations of school-leavers, we highlight two aspects. Firstly, there is the question of how *MBO* school-leavers who continue their studies in *HBO* found the match between the study programme completed and their continuing education. Secondly, a similar assessment can be made with regard to entry onto the labour market: how did working school-leavers find the match between the study programme completed and their present job? A more general evaluation of the degree of satisfaction with regard to the study programme completed can be made by asking school-leavers whether, in retrospect, they would choose the same study programme again.

Figure 11.6 shows the developments of general opinions of the study programmes completed by *MBO* school-leavers. The upper part of this figure indicates that the percentage of school-leavers who regard the match between the study programme taken and their subsequent study in *HBO* to be good was subject to fluctuations over the years, but that no trend can be observed. To be precise: the percentage for the 1997/98 outflow cohort differs by only 1% from the corresponding percentage for the 1990/91 cohort (percentages being 34% and 33%, respectively). For some educational sectors, however, trends

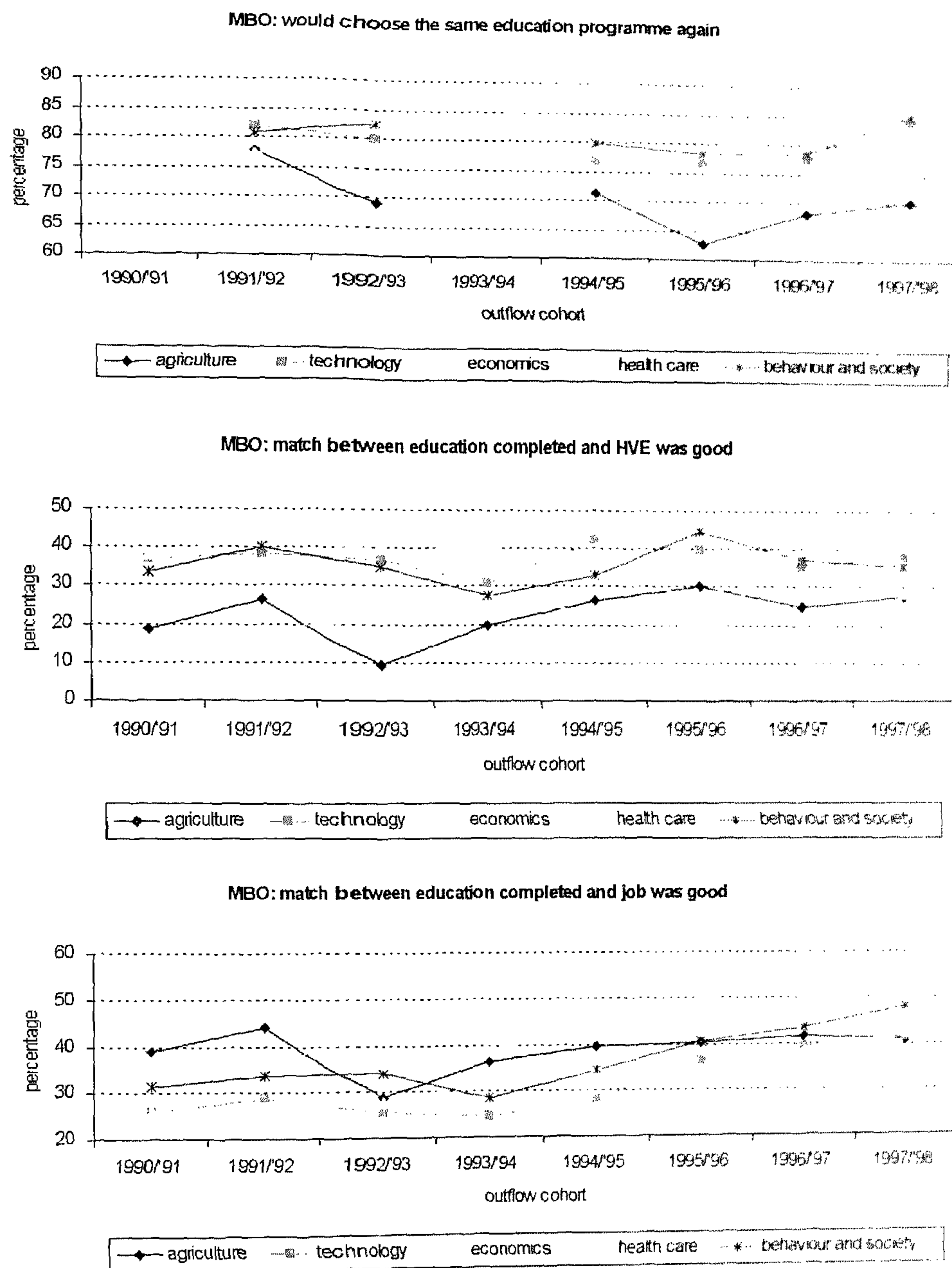


Figure 11.6: Developments of different indicators of a general opinion by MBO school-leavers (long tracks) of their study programme.

Source: ROA, RUBS 1992-1999

can be observed. For example, school-leavers from the economics sector are now less satisfied with the match between the education taken and continuing education than they were in the past. School-leavers who have completed a study programme in health care, on the other hand, appreciate the match between this programme and their subsequent study in HBO more and more. The same pattern can be observed among those with an agricultural education. In 1990/91, 19% of them considered the match to be good, whereas the percentage had risen to almost 28% in 1997/98. Table 11.3 does not show, however, that this development in the agricultural sector has anything to do with the introduction of the qualification structure into this sector. Although the effect found points in the expected direction, it is not significant.

| Indicator | Effect introduction QS in agricultural sector | | |
|--|---|----------------------|----------------------|
| | model 3 ^a | model 3 ^b | model 3 ^c |
| MBO (long tracks) | | | |
| General opinion of study programme | | | |
| Found match between education taken and HBO good | 0.109 | 0.135 | 0.156 |
| Found match between education completed and job good | 0.057 | 0.047 | -0.432** |
| Would choose same study programme again | -0.429** | -0.420** | -0.453** |
| KMBO (short tracks) | | | |
| General opinion of study programme | | | |
| Found match between education completed and job good | 0.023 | 0.023 | -0.024 |
| Would choose same study programme again | 0.134 | 0.133 | 0.016 |

Notes: * = $p < 0.05$; ** = $p < 0.01$; ^a = checked for educational sector; ^b = checked for educational sector, ethnicity, gender, previous education and age; ^c = checked for educational sector, ethnicity, gender, previous education, age and outflow cohort; ^d = non-standardised regression effects, instead of logit effects.

Table 11.3: Effect of the introduction of the qualification structure into the agricultural education sector on the indicators for the general opinion of (K)MBO school-leavers regarding the education completed: logit effects

Source: ROA, RUBS 1992-1999

The positive opinion of the match experienced between the education completed and current activities increased across the board during the period under investigation. Of the most recent outflow cohort, 45% of the MBO school-leavers

who work consider the match between their education and their job as good, against 30% from the cohort that goes back furthest in time. This improvement in the general evaluation of the labour market qualification of study programmes can be found in all educational sectors, with the exception of agriculture. In the latter educational sector, the percentage of school-leavers that regard the match between the education completed and their current job as good has remained constant when we compare the various outflow cohorts. This relative deterioration in the agricultural sector is related to the introduction of the qualification structure, as can be seen from the results presented in table 11.3. Further analysis (Wolbers, 2001) indicates that – contrary to the effects found earlier – the effect of

the introduction of the qualification structure into the agricultural education sector applies both to school-leavers who have completed an education at level 3 and those who left school at level 4.

As can be seen in figure 11.6, about three-quarters of all MBO school-leavers, when they look back, would choose the same study programme again³⁵. From this, we may conclude that the majority of school-leavers are generally satisfied with the education completed. There have been few changes over the years, although it seems that general satisfaction with the education completed has taken an upward turn very recently. The results of future data collections will need to provide a greater insight into this. With respect to differences between educational sectors, we can see that school-leavers from the health care and society, and technology sectors are currently the ones who reply most often that they would choose the same study programme again (85% and 84%, respectively). At 70%, those who completed an agricultural education are, looking back, the least satisfied with the choice of study programme made in the past. In addition, this satisfaction level appears to have dropped since the introduction of the qualification structure. The estimated regression coefficient in table 11.3 shows that, after the introduction of the new qualification structure, the odds ratio of choosing the same education again versus not doing so, is only about two-thirds of the original odds ratio ($e^{-0.453} = 0.636$). Again, this result applies to both school-leavers who completed their education at level 3 and those who did so at level 4 (see Wolbers, 2001).

As is the case in MBO, KMBO school-leavers also increasingly regard the match between the study programme completed and their current job as good (see figure 11.7). In particular, during the past few years, their opinion of the match between education and job has improved sharply. The greatest increase occurred among KMBO school-leavers in agriculture: from 42% in 1990/91 to 57% in 1997/98. However, this remarkable increase has nothing to do with the introduction of the qualification structure into agriculture (see table 11.3), because the other educational sectors have also experienced a reasonable increase in the percentage of school-leavers who regard the match between the education completed and their current job as good. One exception is the health care sector, where – in spite of a positive peak for the 1993/94 outflow cohort – hardly any changes have been observed in their opinion concerning the match between education and work.

With respect to satisfaction regarding the choice of a KMBO programme made in the past, we can see that this has increased in particular among school-leavers in the health care and economics sectors. For the former sector, the increase is 22% (from 49% to 71%); for the latter, it is 15% (from 51% to 66%). The opinion of those with a technical education has not changed much in the course of time. This also applies to agricultural school-leavers, if we compare the percentages of the first and the last cohort. During the intermediate period, however, there have been considerable fluctuations in the percentage of school-leavers who, with hindsight, would choose the same study programme again. These fluctuations have nothing to do with the introduction of the qualification structure into agricultural education, as can be seen from table 11.3.

³⁵ Unfortunately, this information is not available for the 1993/94 outflow cohort.

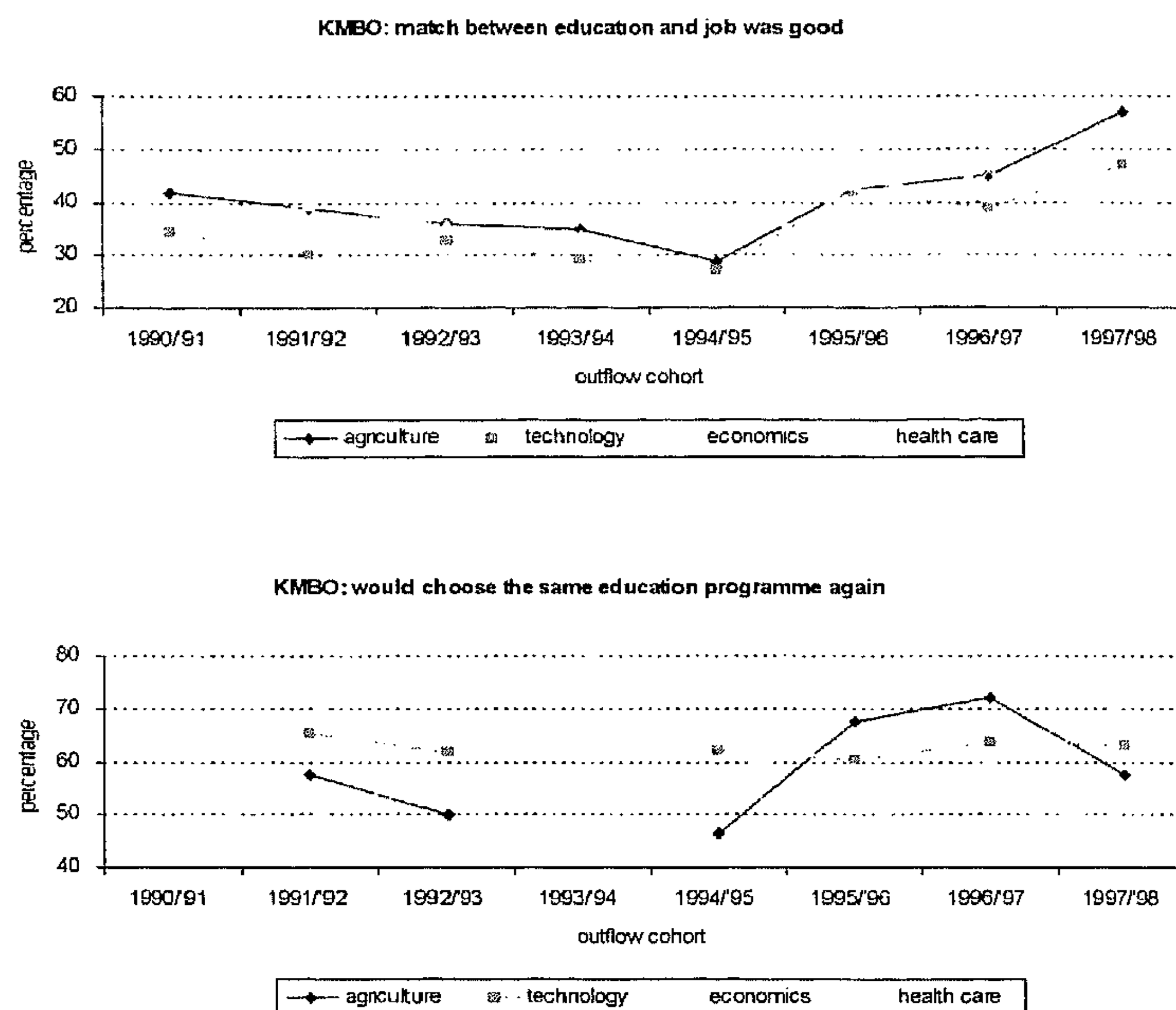


Figure 11.7: Developments of different indicators of the general opinion of KMBO school-leavers (short tracks) of their study programmes

Source: ROA, RUBS 1992-1999

11.6 Conclusions and discussion

In this chapter, we have investigated how the transition from secondary vocational education to subsequent destinations takes place for individual school-leavers. This was done by focusing on the development of external returns to education, with the agricultural education sector exhibiting the effect of the introduction of the qualification structure on external returns of secondary vocational education. If we consider the qualification objectives of study programmes in secondary vocational education, the transition process relates both to the position in continuing education and to that upon entering the labour market. When we determined the external returns of study programmes, we therefore dealt in detail with these two qualification objectives. For our study, we have made use of ROA school-leaver surveys, which have been held since the beginning of the 1990s, and which provide information on the outflows and destinations of school-leavers in secondary vocational education.

Considering the limited amount of time that has passed since the introduction of the WEB in August 1997, the outflow from new study programmes for educational sectors other than the agricultural sector cannot yet be observed. The evaluation made therefore has the nature of a pre-test for the other sectors. A reliable evaluation of the effect of the new Act can only be made in a few years' time. For agricultural education, we were able to compare the transition process before and after the

introduction of the qualification structure, because all study programmes in this sector introduced the new qualification structure in August 1992.

The main conclusions from the pre-test are:

- transfer from MBO (long tracks) to HBO increased considerably over the years, from 25% in 1991 to 39% in 1998. One-third of MBO school-leavers who continue their studies in HBO consider the match between MBO and HBO to be good;
- approximately 15% of MBO school-leavers who continue their studies drop out of HBO. This dropout is comparable to the dropout of HAVO school-leavers in HBO. A quarter of all dropouts switch to a different study programme;
- the chance of having a paid job decreased at the beginning of the 1990s, as a result of economic developments on the labour market, but then increased sharply again. At the moment, there is a very tight labour market situation. This can be concluded both from the low unemployment rate, the increasing number of permanent jobs and the relatively large wage increases;
- about three-quarters of all school-leavers in MBO have a job for which their education level is a minimum requirement. In KMBO, this percentage is lower (60%). A positive opinion of the match between education and job has improved considerably in the course of time: approximately 50% consider this match to be good;
- In general, school-leavers are satisfied with the study programme that they have completed. Three-quarters of all MBO school-leavers would choose the same study programme again, among KMBO school-leavers, the percentage is slightly lower.

The prevailing picture is that the transfer from secondary vocational education to continuing education has increased, without this leading to a higher dropout rate. However, dropout rates were quite high. In general, the transition from secondary vocational education to the labour market is successful. The position of MBO school-leavers (long tracks), however, is clearly better than that of KMBO school-leavers (short tracks).

The agricultural education sector offers the possibility of determining what the effects of the introduction of the new qualification structure have been. The main conclusions are as follows:

- transfer to HBO decreased after the introduction of the qualification structure. This effect applies to 3-year, not 4-year programmes;
- the match between education and work deteriorated after the introduction of the qualification structure. School-leavers from 2 and 3-year programmes less often find a job for which their educational level is required. In addition, school-leavers from all agricultural study programmes consider the match between education and work to have deteriorated;
- the satisfaction of school-leavers with the study programme that they have completed decreased after the introduction of the qualification structure.

Although both before and after the introduction of the qualification structure, the 3-year programmes did not and do not formally offer the possibility of a transfer to HBO, such transfers did, in fact, take place. In this sense, we may conclude that the introduction of the qualification structure into the education sector has led to a deterioration of the transition to continuing education and the labour market. This deterioration appears to occur in particular in the 3-year programmes.

How can this be explained? A number of study programmes that used to be long-track *MBO* programmes, were devalued to level 3 programmes after the introduction of the qualification structure. As these programmes no longer provide direct access to *HBO* in the new qualification structure, this has resulted in a decrease in the total transfer from the agricultural education sector into *HBO* after the introduction of the qualification structure. In addition, it appears that employers do not value the new level 3 programmes in the same way in the labour market as the original *MBO* programmes, which means that the match between education and work has deteriorated across the board.

This gives rise to the question of whether splitting *MBO* into two levels (level 3 and level 4) was such a good idea. Firstly, it has put a strain on the transfer qualification, because school-leavers at level 3 no longer have sufficient access to *HBO*, while the corresponding study programmes in the old system did provide such access. In addition, the labour market qualification is compromised to some extent, as employers appear not to be able to acknowledge the value of an education at level 3. It is likely that the new qualification level is either not clearly recognised or not recognised at all in the occupational field, and employers prefer to employ such school-leavers at a slightly lower level, in order to avoid the high training costs expected. Apparently, school-leavers also experience this increased discrepancy between required and acquired qualifications, as they are less inclined to say that the match between the education completed and their job is a good one.

It is conceivable that such a problem also occurs in the case of the division of *KMBO* into levels 1 and 2. Unfortunately, an adequate pre-test is not available here, because of the lack of a study programme that matches level 1 in the old qualification structure. In addition, agricultural education has no programmes at level 1 in the new situation. The reason for this is the very problem described above. Level 1 provides problems, because business and industry fail to recognise it as a qualification. Moreover – even if the work existed – it is not regarded as relevant for education, but as unskilled work without any level (see Gielen & Le Rütte, 1998: 105).

To what extent the above also applies to the introduction of the Adult and Vocational Education Act into the other educational sectors cannot be determined at this moment. It seems, however, that the division into levels in the new qualification structure does not always closely match the number of levels recognised by employers on the labour market. As soon as a full cohort of school-leavers has left the system in the new qualification structure, we can see to what extent this is, in fact, the case.

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